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EXAMINER

RAMPURIA, SATISH

ART UNIT	PAPER NUMBER
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2191

NOTIFICATION DATE	DELIVERY MODE
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09/30/2011

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/089,139	BOSWORTH ET AL.	
	Examiner	Art Unit	
	SATISH RAMPURIA	2191	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 March 2011.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 5) ☒ Claim(s) 1-13, 20-32 and 39-50 is/are pending in the application.
- 5a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 6) ☐ Claim(s) ____ is/are allowed.
- 7) ☒ Claim(s) 1-13, 20-32 and 39-50 is/are rejected.
- 8) ☐ Claim(s) ____ is/are objected to.
- 9) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 10) ☒ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

Response to Amendment

1. This action is in response to the RCE received on 03/23/2011.
2. Claims cancelled by the applicants: 14-19 and 33-38.
3. Claims amended by the Applicants: 1 and 20.
4. New claims added by the applicants: 39-50.
5. Claims pending in the application: 1-13, 20-32 and 39-50.

Continued Examination Under 37 CFR 1.114

6. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 03/23/2011 has been entered.

Response to Arguments

7. Applicant's arguments with respect to claims have been considered but they are not persuasive.

In the remarks, the applicant has argued that:

Wang fails to disclose or suggest, locating a code statement of a second programming language within a first code section.

As Wang fails to disclose or suggest this limitation, Wang also fails to disclose or suggest invoking an execution engine recursively upon locating a code statement of a second programming language within a first code section. Furthermore, Wang also fails

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to disclose or suggest invoking a second code statement processing unit of a second programming language to process a code statement, upon locating a code statement of the second programming language within a first code section and invoking a execution engine recursively.

Examiner's response:

In response to Applicants argument, Wang discloses enabling multiple runtime processor executed by the computer. Each of the runtime processors process their respective intermediate sources derived from an original input source, i.e., Java or Visual Basic Script (See summary). In order to process multi language processor, Wang's system recognizes different input source languages and invokes the respective processor according to the input source language (col. 2, lines 26-35). Wang's system clearly discloses locating a code statement of a second programming language within a first code section. The Java Virtual Machine 110 performs its normal processing of the intermediate source 200 until it invokes a thread object run method to initiate execution of the VisualBasic Script interpreter 112 (indicated by the instruction SYN.NOTIFY and the letter A on the execution sequence 204), sends a notification to the VisualBasic Script interpreter 112 (also indicated by the instruction SYN.NOTIFY and the letter A on the execution sequence 204). See col. 3, lines 50-67. Further, Wang's system clearly discloses invoking a second code statement processing unit of a second programming language to process a code statement, upon locating a code statement of the second programming language within a first code section and invoking a execution engine recursively. See col. 3, lines 57-67. The Java Virtual Machine 110 performs its normal processing of the intermediate source 200 until it invokes a thread object run method to initiate execution of the VisualBasic Script interpreter 112 (indicated by the instruction SYN.NOTIFY and the letter A on the execution

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sequence 204), sends a notification to the VisualBasic Script interpreter 112 (also indicated by the instruction SYN.NOTIFY and the letter A on the execution sequence 204), and then waits for a notification to be received from the VisualBasic Script interpreter 112. Note that this sequence of interaction between the Java Virtual Machine 110 and the VisualBasic Script interpreter 112 could be repeated indefinitely. See col. 4, lines 23-27.

Specification

8. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The new amended claims recite 'computer-readable medium'. However, applicants' specification does not describe/support computer-readable medium.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

9. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

10. Claims 39-50 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Newly added Claims 39-50 recited a computer-readable medium. Applicants have not provided any specific definition of the term "computer-readable medium" (see, for example, Applicant's specification, 2004/0040011; paragraph [0071]). Examiner is to apply the term its broadest reasonable interpretation of the term computer-readable medium which could be any

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medium readable by a computer which includes carrier waves or signals i.e., reading wirelessly.

Thus, the claim is directed to non-statutory subject matter. See MPEP § 2106.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

12. Claims 1, 2, 3, 6, 7, 20, 22, 25, 26, 39, 40, 41, 44 and 45 are rejected under 35

U.S.C. 102(e) as being anticipated by 6,292,936 to Wang (hereinafter, Wang).

Per claims 1 and 2:

Wang discloses:

- A method of computing comprising:
- reading, by an execution engine (col. 2, lines 49-55 "...run time processors...that are executed...comprises a Java Virtual Machine...executes Java programming statements...VisualBasic Script interpreter... executes VisualBasic Script programming statements"), a data processing representation having code sections with code statements of at least a first and a second programming language (col. 1, lines 44-46 "Each of the

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runtime processors processes their respective corresponding intermediate sources derived from an original input source in a synchronous manner”);

- recognizing, by an execution engine (col. 2, lines 49-55 “...run time processors...that are executed...comprises a Java Virtual Machine...executes Java programming statements...VisualBasic Script interpreter... executes VisualBasic Script programming statements”), a first code section with at least code statements of a first programming language (Fig. 2, element 200 (JAVA/HTML) and col. 2, lines 56-59 “The server system 106 may further include one or more translators 114 that are executed to translate the original input source for the runtime processors 110 and 112”);
- invoking, by an execution engine (col. 2, lines 49-55 “...run time processors...that are executed...comprises a Java Virtual Machine...executes Java programming statements...VisualBasic Script interpreter... executes VisualBasic Script programming statements”), a first code statement processing unit of the first programming language to process the first code section (col. 2, lines 51-55 “the runtime processors comprise a Java Virtual Machine (JVM) 110 that executes Java programming statements”; col. 1, lines 44-46 “Each of the runtime processors processes their respective corresponding intermediate sources derived from an original input source in a synchronous manner”);
- invoking, by the execution engine, a second code statement processing unit of a second programming language to process a code statement (col. 2, lines 51-55 “the runtime processors comprise... a VisualBasic Script interpreter (VBSI) 112 that executes VisualBasic Script programming statements”), when the first code statement processing unit locates a code statement of the second programming language within the first code

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- section(col. 3, lines 57-67 “The Java Virtual Machine 110 performs its normal processing of the intermediate source 200 until it invokes a thread object run method to initiate execution of the VisualBasic Script interpreter 112 (indicated by the instruction SYN.NOTIFY and the letter A on the execution sequence 204), sends a notification to the VisualBasic Script interpreter 112 (also indicated by the instruction SYN.NOTIFY and the letter A on the execution sequence 204), and then waits for a notification to be received from the VisualBasic Script interpreter 112 (indicated by the instruction SYN.WAIT and the letter D on the execution sequence 204)”), and invokes the execution engine recursively (col. 4, lines 24-30 “sequence of interaction between the Java Virtual Machine 110 and the VisualBasic Script interpreter 112 could be repeated indefinitely”);
- recognizing, by an execution engine (col. 2, lines 49-55 “...run time processors...that are executed...comprises a Java Virtual Machine...executes Java programming statements...VisualBasic Script interpreter... executes VisualBasic Script programming statements”), a second code section with at least code statements of a second programming language (Fig. 2, element 202 (VisualBasic) and col. 1, lines 46-48 “One or more of the respective corresponding intermediate sources includes a synchronizer token that provides synchronization among the runtime processors”);
 - invoking, by an execution engine (col. 2, lines 49-55 “...run time processors...that are executed...comprises a Java Virtual Machine...executes Java programming statements...VisualBasic Script interpreter... executes VisualBasic Script programming statements”), a second code statement processing unit of the second programming language to process the second code section (col. 2, lines 51-55 “the runtime processors

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comprise... a VisualBasic Script interpreter (VBSI) 112 that executes VisualBasic Script programming statements”; col. 1, lines 49-51 “Using the synchronizer token, an execution sequence of the original input source is maintained”); and

- invoking, by the execution engine, the first code statement processing unit of the first programming language to process a code statement (col. 2, lines 51-55 “the runtime processors comprise a Java Virtual Machine (JVM) 110 that executes Java programming statements”), when the second code statement processing unit locates a code statement of the first programming language within the second code section (col. 4, lines 1-8 “Once invoked, the VisualBasic Script interpreter 112 performs its normal processing of the intermediate source 202 until it encounters a synchronizer token (indicated by the instruction SYNCHRONIZER and the letter B on the execution sequence 204). At that point, the VisualBasic Script interpreter 112 sends a notification to the Java Virtual Machine 110 and then waits to receive a notification from the Java Virtual Machine 110”), and invokes the execution engine recursively (col. 4, lines 24-30 “sequence of interaction between the Java Virtual Machine 110 and the VisualBasic Script interpreter 112 could be repeated indefinitely”).

Per claim 3:

The rejection of claim 1 is incorporated, and further, Wang discloses:

- wherein said second code section is embedded within said first code section. The limitations in the claims are similar to those in claim 1, and rejected under the same rational set forth in connection with the rejection of claim 1.

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Per claim 6:

The rejection of claim 1 is incorporated, and further, Wang discloses:

- recognizing a third code section with at least code statements of a third programming language (col. 2, lines 56-59 “The server system 106 may further include one or more translators 114 that are executed to translate the original input source for the runtime processors 110 and 112”);
- invoking a third code statement processing unit of the third programming language to process the third code section (col. 1, lines 44-46 “Each of the runtime processors processes their respective corresponding intermediate sources derived from an original input source in a synchronous manner”).

Per claim 7:

The rejection of claim 6 is incorporated, and further, Wang discloses:

- wherein said third code section is embedded within said second code section, and said second code section is embedded within said first code section. The limitations in the claims are similar to those in claim 6, and rejected under the same rationale set forth in connection with the rejection of claim 6.

Claims 20, 21, 22, 25 and 26 are the apparatus claim corresponding to method claims 1, 2, 3, 6 and 7 respectively, and rejected under the same rationale set forth in connection with the rejection

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of claims 1, 2, 3, 6 and 7 respectively, above, as noted above and Wang also discloses system, see FIG. 1 and associated text.

Claims 39, 40, 41, 44 and 45 are the computer-readable medium claim corresponding to method claims 1, 2, 3, 6 and 7 respectively, and rejected under the same rational set forth in connection with the rejection of claims 1, 2, 3, 6 and 7 respectively, above, as noted above and Wang also discloses system, see FIG. 1 and associated text.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 4, 5, 8, 23, 24, 27, 42, 43 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang in view of US Patent No. 6,732,330 to Claussen et al. (hereinafter, Claussen).

Per claim 4:

The rejection of claim 1 is incorporated, and further, Wang does not explicitly disclose wherein said first language is a directive language, and said second language is a selected one of XML and an object-oriented language.

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However, Claussen discloses in an analogous computer system wherein said first language is a directive language, and said second language is a selected one of XML and an object-oriented language (col. 2-3, lines 66-67 and 1-2 "...supporting multiple languages is compiled in to an XML... and thereafter, into a Java™ servlet...").

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the method of wherein said first language is a directive language, and said second language is a selected one of XML and an object-oriented language as taught by Claussen into the method of enabling multiple runtime processors in an embedded scripting system as taught by Wang. The modification would be obvious because of one of ordinary skill in the art would be motivated to use XML and Java to provide a technique for publishing Internet content that can fully leverage the manipulation as suggested by Claussen (col. 2, lines 23-55).

Per claim 5:

- wherein said first language is an object-oriented language, and said second language is XML. The limitations in the claims are similar to those in claim 4, and rejected under the same rationale set forth in connection with the rejection of claim 4.

Per claim 8:

- wherein said first language is a directive language, said second language is an object-oriented language and said third language is XML. The limitations in the claims are

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similar to those in claim 4, and rejected under the same rationale set forth in connection with the rejection of claim 4.

Claims 23, 24 and 27 are the apparatus claim corresponding to method claims 4, 5 and 8 respectively, and rejected under the same rationale set forth in connection with the rejection of claims 4, 5 and 8 respectively, above, as noted above and Wang also discloses system, see FIG. 1 and associated text.

Claims 42, 43 and 46 are the apparatus claim corresponding to method claims 4, 5 and 8 respectively, and rejected under the same rationale set forth in connection with the rejection of claims 4, 5 and 8 respectively, above, as noted above and Wang also discloses system, see FIG. 1 and associated text.

15. Claims 9-13, 28-32 and 47-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang in view of US Patent No. 5,428,792 to Conner et al. (hereinafter, Conner).

Per claim 9:

The rejection of claim 1 is incorporated, and further, Wang discloses:

- invoking the library function, and outputting the result of the invocation (col. 3, lines 40-42 “The remaining VisualBasic Script blocks in the original input source 116 are translated into notify method and wait method invocations”).

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Wang does not explicitly disclose wherein the method further comprises recognizing an invocation of a library function within at least a selected one of said first and second code sections.

However, Conner discloses in an analogous computer system wherein the method further comprises recognizing an invocation of a library function within at least a selected one of said first and second code sections (col. 7, lines 20-23 “class designer defines the class interface, implements the class methods, and finally loads the resulting object code into a class library”).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the method of recognizing an invocation of a library function within at least a selected one of said first and second code sections as taught by Conner into the method of enabling multiple runtime processors in an embedded scripting system as taught by Wang. The modification would be obvious because of one of ordinary skill in the art would be motivated to use a library function to provide the reusability of the OOP functions already exist as suggested by Conner (col. 1, lines 55-67).

Per claim 10:

The rejection of claim 1 is incorporated, and further, Wang does not explicitly disclose wherein the library function is a selected one of an emit function for outputting execution results, a pop function for returning an element, and a push function for backing up an insertion point.

However, Conner discloses in an analogous computer system wherein the library function is a selected one of an emit function for outputting execution results, a pop function for returning an element, and a push function for backing up an insertion point (col. 5, lines 1-12 “...class is a

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definition of an object... <stack> is an example of a class... stack contains two data elements (<stackArray> and <stackTop>), and supports three methods, <create()>, <push()>, and <pop()>...”).

The feature of library function is a selected one of an emit function for outputting execution results, a pop function for returning an element, and a push function for backing up an insertion point would be obvious for the reasons set forth in the rejection of claim 9.

Per claim 11:

The rejection of claim 1 is incorporated, and further, Wang does not explicitly disclose wherein the method further comprises recognizing a header section of a selected one of the first and the second programming; recognizing a directive statement within the header section, enumerate one or more data packages; and importing the enumerated one or more data packages for use within code sections with at least statements of the selected first and second programming language.

However, Conner discloses in an analogous computer system wherein the method further comprises recognizing a header section of a selected one of the first and the second programming language (col. 9, lines 35-40 “...a valid C header file which contains macros necessary to invoke public methods and access public data elements of the class... file... included in any client of the class, and is created by the SOM compiler”); recognizing a directive statement within the header section, enumerate one or more data packages (col. 25, lines 14-20 “section contains an include statement that is a directive to the OIDL preprocessor telling the compiler where to find the class interface definition for this class' parent class...”); and importing the enumerated one or more

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data packages for use within code sections with at least statements of the selected first and second programming language (col. 2, lines 19-21 "...bindings are input to the particular target language compiler to generate object module...").

The feature of recognizing a header section... recognizing a directive statement... and importing the enumerated... would be obvious for the reasons set forth in the rejection of claim 9.

Per claim 12:

- wherein the method further comprises recognizing a header section of a selected one of the first and the second programming language; recognizing a declare statement within the header section, enumerating one or more processing methods; and instantiating the enumerated one or more processing methods for use within code sections with at least statements of the selected first and second programming language. The limitations in the claims are similar to those in claim 11, and rejected under the same rationale set forth in connection with the rejection of claim 11.

Per claim 13:

- wherein the method further comprises recognizing a header section of a selected one of the first and the second programming language; recognizing a declare statement within the header section, enumerating one or more instance variables; and instantiating the enumerated one or more instance variables for use within code sections with at least statements of the selected first and second programming language. The limitations in the

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claims are similar to those in claim 11, and rejected under the same rational set forth in connection with the rejection of claim 11.

Claims 28-32 are the apparatus claim corresponding to method claims 9-13 respectively, and rejected under the same rational set forth in connection with the rejection of claims 9-13 respectively, above, as noted above and Wang also discloses system, see FIG. 1 and associated text.

Claims 47-50 are the computer-readable medium claim corresponding to method claims 9, 11-13 respectively, and rejected under the same rational set forth in connection with the rejection of claims 9, 11-13 respectively, above, as noted above and Wang also discloses system, see FIG. 1 and associated text.

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Satish Rampuria whose telephone number is (571) 272-3732. The examiner can normally be reached on 8:30 am to 5:00 pm Monday to Friday. Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: 571-272-2100.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wei Y. Zhen can be reached on (571) 272-3708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Satish Rampuria
Examiner, Art Unit 2191

/Anna Deng/

Primary Examiner, Art Unit 2191